

Carcinoma of the bladder presenting as gonococcal cystitis

A L BLACKWELL AND J BARROW

From the Department of Genitourinary Medicine, St Thomas's Hospital, London

SUMMARY A patient with gonococcal infection presented with frank haematuria. On subsequent investigation a transitional cell carcinoma was found. Because the haematuria resolved rapidly after treatment with ampicillin no sinister cause for the bleeding was suspected. Since gonorrhoea is rarely associated with gross haematuria, when it does occur a thorough investigation should be undertaken.

Introduction

Haematuria is an unusual presenting feature in cases of gonococcal infection. In a survey of patients attending the genitourinary departments at the London Hospital and St Mary's Hospital haematuria was the presenting symptom in 1% of 200 male patients with gonococcal urethritis.¹ Amarasuriya² found only seven cases of gonorrhoea associated with haematuria during a 10-month study of all patients attending Guy's Hospital department of genitourinary medicine. Barlow and Phillips³ found only one patient with haematuria out of 570 cases of gonococcal infection in women attending St Thomas's Hospital in 1976.

In this paper we report the case of a male patient who complained of haematuria and was found to have both gonococcal infection and a bladder tumour.

Case report

PREVIOUS HISTORY

A 28-year-old Jamaican man attended this department on 10 November 1978. He complained of a three-day history of yellow urethral discharge associated with mild dysuria. He had had frequency of micturition during the 12 hours before attending the clinic but was not worried until he started passing blood instead of urine three hours before attending. He had had three previous episodes of haematuria, in 1969, 1972, and 1973. All these episodes resolved rapidly and spontaneously, but on the last occasion

he attended the casualty department of Dudley Road Hospital in Birmingham, where a mid-stream urine (MSU) sample was obtained and the patient referred to the urology outpatient clinic.

The MSU specimens collected on 13 and 20 February 1973 both showed numerous red blood cells but no increase in the number of leucocytes. Both urine cultures gave negative results, and blood urea and electrolyte concentrations were within normal limits. Haemoglobin concentration was 15.4 g/dl and the ESR was 6 mm in the first hour. The patient did not attend for follow up and an intravenous urogram was therefore not carried out.

The patient did not notice any further bleeding until he attended this hospital in November 1978. The history contained no other notable features and no account of trauma to either genitals or loins. He had last had intercourse four days previously with a casual partner and three weeks previously with a regular girlfriend.

CLINICAL EXAMINATION

On examination he was fit but anxious. His blood pressure was 125/80 mm/Hg. A slight, grey urethral discharge was present when the anterior urethra was massaged, but there was no blood or sign of trauma at the meatus. Testes and epididymes were normal and there was no renal angle tenderness.

LABORATORY FINDINGS

A urethral smear showed typical Gram-negative intracellular diplococci and culture for *Neisseria gonorrhoeae* gave a positive result. Urine was uniformly red in three glasses and indistinguishable from blood to the naked eye. An MSU sample showed many red blood cells, but on culture there was a scanty growth of probable contaminants. Haemoglobin was 15.6 g/dl and white blood count

Address for reprints: Dr A L Blackwell, Department of Genitourinary Medicine, St Thomas's Hospital, London SE1 7EH

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was $6.2 \times 10^9/l$ with a normal differential blood count. ESR was 5 mm in the first hour. Sick-cell test gave a negative result and blood urea and electrolyte concentrations were within normal limits.

TREATMENT

Ampicillin 2 g plus probenecid 1 g were given at once by mouth followed by ampicillin 500 mg plus probenecid 500 mg four times daily for one week.

OUTCOME

The patient was asymptomatic by the following day, and when next seen on 13 November his urine was clear and showed no blood on dip-testing. Urethral cultures now gave negative results. An intravenous urogram was performed on 18 December, which showed a filling defect at the base of the bladder. Unfortunately the patient changed his address and failed to return for urgent cystoscopy. As a result of persistent contact-tracing the patient attended again in May 1979.

On 11 May 1979 he returned to the clinic and although asymptomatic was found to have non-specific urethritis, which was treated with triple tetracycline 1 tablet twice daily for 20 days. He had had no further bleeding since his attack of gonorrhoea in November and his urine still showed no blood on dip-testing.

On 23 May 1979 cystourethroscopy showed a papillary tumour on a 1-cm stalk at the base of the bladder with two tumours in the posterior urethra. The tumours were resected at cystoscopy and Thiotepa was instilled for one hour. Histological examination showed that the bladder tumour was a well differentiated transitional cell carcinoma with no evidence of invasion. At repeat cystoscopy on 28 May the resected area was oedematous but there was no evidence of recurrence.

Discussion

The peak prevalence of bladder carcinoma is in the sixth decade of life and the condition is rare in patients less than 40 years of age. The tumour is epidemiologically linked with schistosomiasis, with contact with 2-naphthylamine and with rubber anti-oxidants, and with smoking more than 15 cigarettes a day.⁴ We were unable to find any published reports relating venereal disease to bladder carcinoma but it is interesting that Kaplan *et al*,⁵ in a retrospective study, reviewed 232 cases of primary carcinoma of the urethra and found a history of venereal disease in

37%. Ashworth⁶ reviewed 756 cases of bladder carcinoma and found simultaneous urethral tumours in 14 (1.8%) patients. The associated urethral tumours were most often found in the posterior urethra, especially if the bladder tumour was near the internal meatus, as it was in the present case.

Our patient had lived in Jamaica until the age of 4 when he came to live in Birmingham. In Birmingham he worked as a chrome-plater but moved to London in the mid-1970s to work as a motor mechanic. His history about smoking was vague, but he insisted he smoked less than 15 cigarettes a day. He denied previous venereal disease and his serological tests for syphilis gave negative results.

It is possible that this patient's tumour was either occupational in origin or was related to his smoking, but since his first attack of haematuria occurred at the early age of 20 this seems unlikely. No obvious definite predisposing factor could be found and indeed it was thought initially that his haematuria was due to his gonococcal infection. This view was reinforced by the rapid disappearance of the haematuria after treatment with penicillin. The pre-existing lesions in the urethra and the bladder presumably allowed the gonococcus to behave more aggressively and to present as a haemorrhagic cystitis. There was no blood at the meatus when the anterior urethra was massaged and hence probably little, if any, bleeding from the anterior urethra.

It would thus seem advisable to carry out full urinary tract investigations in all cases of gonorrhoea which present with florid haematuria.

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